Docket No.: H0-P02652US1
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of:
Jose Engelmayer et al.

Application No.: 10/663,258 | Confirmation No.: 2875

Filed: September 16, 2003 | Art Unit: 1656

For: LACTOFERRIN COMPOSITION AND METHODS OF WOUND TREATMENT | Examiner: C. M. Kam

APPEAL BRIEF

MS Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

As permitted under 37 C.F.R. § 1.136(a)(1), this brief is filed within seven months of the Notice of Appeal, filed in this case on September 4, 2007, and is in furtherance of said Notice of Appeal. The extension of time fee for five months is co-submitted with this brief.

The fees required under 37 C.F.R. § 41.20(b)(2) are dealt with in the accompanying TRANSMITTAL OF APPEAL BRIEF.

This brief contains items under the following headings as required by 37 C.F.R. § 41.37 and M.P.E.P. § 1206:

I. REAL PARTY IN INTEREST

The real party in interest for this appeal is:

Agennix Incorporated

II. RELATED APPEALS, INTERFERENCES, AND JUDICIAL PROCEEDINGS

There are no other appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

The Application filed on September 16, 2003 contained claims 1-51. Claims 1-51 were subject to restriction requirement in an Office Action dated May 2, 2006. In a response filed by Applicants on May 30, 2006, restriction group II was elected, claims 1-14 were withdrawn as directed to an unelected group and claims 16 and 48 were amended. Claims 15-51 were rejected in a non-final Office Action dated June 29, 2006. Claims 15 and 16 were amended in a response filed September 26, 2006. Claims 15-51 were rejected in a non-final Office Action dated December 26, 2006. Claims 1-14 were canceled and claims 16, 26, 31, 33, 38, and 48-51 were amended by Applicants in a response dated January 14, 2007. Claims 15-57 were rejected in a non-final Office Action dated March 27, 2007. Claims 16, 26, 30, 31, 33, and 50-51 were amended by Applicants in a response dated March 30, 2007. Claims 15-51 were rejected in a non-final Office Action dated June 6, 2007 (referred to herein as "the Action"). Applicants filed a notice of appeal on September 4, 2007.

A. Total Number of Claims in Application

There are 37 claims pending in application.

B. Current Status of Claims

1. Claims canceled: 1-14

2. Claims withdrawn from consideration but not canceled: None

3. Claims pending: 15-51

4. Claims allowed: None

5. Claims rejected: 15-51

C. Claims On Appeal

Pending claims 15-51 are all rejected and all of these claims are herein appealed. The claims on appeal are reproduced in Appendix A.

IV. STATUS OF AMENDMENTS

There are no pending amendments.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Paragraph numbers refer to the application as filed. The claimed subject is defined in part by independent claims 15, 16, 31, 33, 48, 49, 50 and 51. Independent claim 15 generally relates to a method for treating a wound in a subject (**[0009]**, line 1) comprising the step of contacting the wound with a pharmaceutical composition (**[0081]**, lines 2-4) comprising a therapeutically effective amount of a lactoferrin composition (**[0012]**, lines 1-2) and a pharmaceutically acceptable polymer having a viscosity in the range of about 1 to about 12,000,000 cP at room temperature (**[0012]**, lines 3-4).

Another embodiment, as represented in claim 16, relates to a method of treating a wound (**[0017]**, lines 1-2), other than burn wounds, oral wounds, ophthalmic wounds or gastric or duodenal ulcers (**[0019]**, lines 1-8), comprising the step of administering to a subject, other than by buccal administration (**[0009]**, lines 4-5), a therapeutically effective amount of a lactoferrin composition (**[0017]**, lines 2-3; and **[0102]**, lines 1-3).

Independent claim 31 represents a further embodiment involving a method of treating a wound (**[0023]**, line 1), other than burn wounds, oral wounds, ophthalmic wounds or gastric or duodenal ulcers (**[0019]**, lines 1-8), comprising the step of supplementing the local immune system in a subject (**[0023]**, line 2) by administering topically a therapeutically effective amount of a lactoferrin composition (**[0023]**, lines 2-3) in the vicinity of the wound (**[0023]**, line 3; and **[0102]**, lines 1-3).

Another embodiment of the claimed invention, as presented in independent claim 33, is a method of enhancing the local immune system in a subject (**[0024]**, lines 1-2) suffering from a wound, other than burn wounds, oral wounds, ophthalmic wounds or gastric or duodenal ulcers (**[0019]**, lines 1-8), comprising the step of administering topically to the subject (**[0024]**, line 2) a therapeutically effective amount of a lactoferrin composition (**[0023]**, lines 2-3; and **[0102]**, lines 1-3).

Further, the claimed invention of independent claim 48 relates to a method of treating a wound (**[0028]**, line 1), other than ophthalmic wounds or gastric or duodenal ulcers (**[0019]**, lines 1-8), comprising the step of supplementing the systemic immune system in a subject (**[0028]**, lines 1-2) by administering via a parenteral route (**[0028]**, line 3) a therapeutically effective amount of a lactoferrin composition(**[0028]**, line 3; and **[0102]**, lines 1-3).

As represented by independent claim 49, another embodiment of the invention involves a method of enhancing the systemic immune system of a subject suffering from a wound (**[0029]**, lines 1-2), other than ophthalmic wounds or gastric or duodenal ulcers (**[0019]**, lines 1-8), comprising the step of parenterally administering to the subject (**[0029]**, lines 2-3) a therapeutically effective amount of a lactoferrin composition(**[0029]**, line 3; and **[0102]**, lines 1-3).

Furthermore, independent claim 50 concerns a method of treating a wound (**[0030]**, line 1), other than oral wounds, ophthalmic wounds or gastric or duodenal ulcers (**[0019]**, lines 1-8), comprising the step of supplementing the mucosal immune system in a subject (**[0030]**, line 2) by administering orally (**[0030]**, line 3) a therapeutically effective amount of a lactoferrin composition (**[0030]**, line 3; and **[0102]**, lines 1-3).

A further embodiment, presented in independent claim 51, relates to a method of enhancing the mucosal immune system in a subject suffering from a wound (**[0031]**, lines 1-2), other than oral wounds, ophthalmic wounds or gastric or duodenal ulcers (**[0019]**, lines 1-8), comprising orally administering to the subject (**[0031]**, line 2) a therapeutically effective amount of a lactoferrin composition (**[0031]**, line 3; and **[0102]**, lines 1-3).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

A. Claims 16-51 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement.

B. Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ando *et al.* (U.S. Patent 5,576,299) as evidenced by Engelmayer *et al.* (U.S. Publication No. 2004/01423037 A1).

C. Claims 16-22, 26-30 and 50-51 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7, 14, 17-19, 26-32 and 38-40 of co-pending Application No. 10/728,521 (based on the amended claims filed September 26, 2006).

D. Claims 15-51 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-14, 16, 18-22 and 35-38 of co-pending Application No. 10/733,621 (based on amended claims filed September 26, 2006).

VII. ARGUMENT

A. 35 U.S.C. § 112, first paragraph

The Examiner has rejected claims 16-51 under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. The Examiner asserts this is a new matter rejection. Applicants respectfully traverse.

The Examiner asserts that, "while the specification discloses the present invention is a method of treating a wound comprising the step of administering to a subject a lactoferrin composition in an amount sufficient to provide an improvement in the wound… the specification does not indicate that the use of a lactoferrin composition in the treatment of a wound other than burn wounds, oral wounds, ophthalmic wounds or gastric or duodenal ulcers by administering a lactoferrin other than buccal administration."(the Action, page 3)

The Examiner, therefore, asserts that the Applicants have failed to sufficiently describe the claimed invention in such a way that a skilled artisan would recognize they were in possession of the claimed invention. However, the Examiner does recognize that, "the specification discloses… exemplary wounds that can be treated include skin wounds, bone wounds, internal wounds, gastrointestinal wounds, oral wounds, ophthalmic wounds, surgical wounds, or and combination thereof (paragraph **[0019]**), and oral administration used includes oral, buccal, enteral or intragastric administration."(the Action, page 3) Thus, the specification provides more than sufficient support for alternative wounds (both at **[0019]** as cited by the examiner, and **[0098]** – **[0101]**) and administration methods (**[0009]** and **[0097]**).

The inclusion of negative limitations in claims is provided for by the MPEP so long as such alternative elements are recited in the specification. "Any negative limitation or exclusionary proviso must have basis in the original disclosure. If alternative elements are positively recited in the specification, they may be explicitly excluded in the claims." *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977) ("[the] specification, having described the whole, necessarily described the part remaining."). MPEP 2173.05(i). In addition, "a lack of literal basis in the specification for a negative limitation may not be sufficient to establish a *prima facie* case for lack of descriptive support." *Ex parte Parks*, 30 USPQ2d 1234, 1236 (Bd. Pat. App. & Inter. 1993). MPEP 2173.05(i). The recited claims including the negative limitations are fully supported under these guidelines. The excluded elements have basis in the specification and numerous alternative species are provided which provide adequate Written Description for the pending claims as a whole.

Furthermore, this is the first rejection based on these grounds the Examiner has given, even though the claims have previously been amended to add similar negative limitations (amendments dated September 26th, 2006 adding the limitations, "other than ophthalmic wounds," and "other than by buccal administration." Similar limitations were added in an amendment dated January 14th, 2007 further including gastric or duodenal ulcers in the wounds excluded from the method of treating). Therefore, Applicants are unclear why this rejection has not been made before and why these particular negative limitations (excluding burn and oral wounds) render the claims insufficient to convey to one of ordinary skill in the art that the inventors were in possession of the claimed invention.

The Examiner also asserts on pages 3 and 4 of the Action that the there is a lack of representative species encompassed by the claims. Applicants respectfully disagree. The Examiner has admitted that the specification discloses multiple exemplary wounds to be treated, the disclosure of these wounds includes wounds other than those excluded in the claims, such as skin and bone wounds. Elaboration on the types of wounds is also provided in the specification at **[0098]** – **[0101]** which disclose exemplary wounds including but not limited to incisional or excisional wounds, chemical wounds, full- and partial-thickness skin wounds, acute wounds such as bullet or infected wounds, and chronic wounds or ulcers such as diabetic ulcers, venous stasis ulcers, and decubitis or pressure ulcers. Such a collective body of exemplary wounds outside of those excluded by the negative limitations clearly provides sufficient disclosure of a representative body of species.

Based on the above, the Applicants respectfully request reversal of the rejection.

B. 35 U.S.C. § 103(a)

Claim 15 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Ando *et al.* (U.S. Patent 5,576,299) as evidenced by Engelmayer *et al.* (U.S. Publication No. 2004/01423037 A1).

Office policy is to follow *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), in the consideration and determination of obviousness under 35 U.S.C. 103(a). The four factual inquires enunciated therein as a background for determining obviousness are as follows:

(A) Determining the scope and contents of the prior art;
(B) Ascertaining the differences between the prior art and the claims in issue;
(C) Resolving the level of ordinary skill in the pertinent art; and
(D) Evaluating evidence of secondary considerations.

MPEP § 2141. The skill level in the art is not presently a contested issue in this case and evidence related to secondary considerations has not been presented because the Examiner has not put forth a *prima facie* case of obviousness.

In addition to implementing the *Graham* analysis, rejections on obviousness grounds must be supported by some articulated reasoning with some rational underpinning. *KSR Int'l Co. v. Teleflex Inc.*, 550 U. S. ____ (2007), 127 S. Ct. 1727, 1741 (2007).

1. Scope and Content of Ando *et al.* (U.S. Patent 5,576,299)

The Examiner accurately reproduces Examples 2 and 4 from Ando *et al.* The Examiner also accurately reports that gelatin is disclosed by Ando *et al.* as a suitable excipient. However, Applicant contends that the disclosure of gelatin as an excipient should be viewed in full context:

> Suitable pharmaceutical excipients include starch, dextrins, glucose, lactose, sucrose, maltose, sorbitol, xylitol, maltitol, gelatin, malt, rice, flour, chalk, silica gel, magnesium carbonate, magnesium stearate, sodium stearate, glycerol monostearate, talc, sodium chloride, dried skim milk, glycerol, propylene glycol, water, ethanol and the like. These compositions can take the form of solutions, suspensions, tablets, pills, capsules, powders, sustained-release formulations and the like.

Col. 4, 55-63. Notably absent from the list of compositional forms are granules (i.e. Example 2). Hence, the Examiner's contention that Ando *et al.* suggests use of gelatin in the granules of Example 2 has no basis in the Ando *et al.* disclosure.

2. Differences between Ando *et al.* (U.S. Patent 5,576,299) and claim 15

Claim 15 is directed to a method for treating a wound in a subject comprising the step of contacting the wound with a pharmaceutical composition comprising a therapeutically effective amount of a lactoferrin composition and a pharmaceutically acceptable polymer having a viscosity in the range of about 1 to about 12,000,000 cP at room temperature.

For comparison, Ando *et al.* is directed to:

> a) A method for the prevention and/or treatment of opportunistic disease, involving administering to a mammal in need thereof an amount of the pharmaceutical composition described above, said amount effective to prevent and/or treat said opportunistic disease caused by opportunistic microorganisms.

b) A method of potentiating the host immune system in a mammal in need thereof, involving optionally adding an amount of raw but not denatured proteins belonging to the class of mammalian transferrin/lactoferrin family, effective to potentiate the host immune system against opportunistic microorganisms, to a pharmaceutically acceptable carrier, and administering the protein and optionally the carrier to the mammal.

c) A method for the prevention and/or treatment of opportunistic diseases, involving administering to a mammal in need thereof an amount of the food described above, the amount effective to prevent and/or treat opportunistic diseases caused by opportunistic microorganisms.

Col. 7, lines 23-42. The Examiner does not allege that the foregoing methods disclosed by Ando *et al.* render the method of claim 15 obvious. This is, of course, correct because the foregoing methods for prevention and/or treatment of opportunistic diseases are clearly distinct indications. None-the-less, the Examiner cites two specific working examples in Ando *et al.* as rendering claim 15 obvious, despite the fact that these two Examples are specifically directed to and in support of the above unrelated indications.

- Example 2

The Examiner contends Ando *et al.*, Example 2, renders claim 15 obvious. Example 2 is directed to treatment of stomatitis and gingivitis correlated with Herpes simplex virus type-1 and *Candida albicans* infection (i.e. opportunistic diseases) in HIV patients. As a consequence of controlling opportunistic infection, "[t]he ulcers and aphthae [canker sores] disappeared from the oral cavity 8-14 days after the treatment." Treatment of the opportunistic infections was by administering "[g]ranules containing human apolactoferrin (350 mg/day as lactoferrin, ferric iron saturation is less than 5%)." Nothing in Example 2 discloses or suggests "the step of contacting the wound with a pharmaceutical composition…." The Examiner makes no showing of how Example 2 meets this limitation or why this limitation would be obvious in view of Example 2. Applicant contends Example 2 discloses the effects of Lactoferrin to stimulate the immune system and thereby control opportunistic infections. Better immune system control of opportunistic infection prevents new oral ulcers and allows pre-existing ulcers to heal. None of this has any relationship to a

method of treating a wound requiring "the step of contacting the wound with a pharmaceutical composition…."

In addition, the granules employed in Example 2 are not related to the compositions used in claim 15. The Examiner attempts to transform these granules into relevant compositions by importing the gelatin excipients used in unrelated formulations into the granules used in Example 2. As discussed above, the Examiner's contention that Ando *et al.* somehow suggests this modification has no basis in the disclosure.

- Example 4

In contrast to Example 2, Example 4 discloses a procedure where bovine native lactoferrin is dissolved in distilled water and then the solution "sprayed over ulcers and aphthae [canker sores] in the oral cavity of cats with stomatitis and gingivitis caused by FIV and dental calculus." This at least discloses "the step of contacting the wound with a pharmaceutical composition…." However, Example 4 is very clearly directed at treating two of "[t]he most frequent opportunistic infections encountered in feline immunodeficiency virus (FIV) infected cats" stomatitis and gingivitis and not to a method of treating a wound. In this regard, Example 2 and 4 are indistinguishable in the target opportunistic infections against which they are directed. In addition, the composition used in Example 4 could not be more different than what claim 15 requires in that it is Lactoferrin in distilled water and lacks a polymer component altogether.

4) Articulated reasoning under *KSR*

The Examiner's rejection may be summarized as 1) a recitation of select portions of the Ando *et al.* disclosure discussed above, 2) an allegation that the recited portions disclose all elements of claim 15, and 3) the following articulated reasoning for the conclusion of obviousness:

Thus, at the time of invention was made, it would have been obvious to one of ordinary skill in the art that a lactoferrin composition comprising gelatin having a viscosity in the range of about 1-12,000,000 cP at room temperature is used for treating wounds because a composition comprising lactoferrin and gelatin can be prepared as a pharmaceutical composition for the treatment as suggested by Ando *et al.*

Allegedly identifying all elements somewhere in the prior art does not in and of itself constitute a *prima facie* case of obviousness. *KSR* at 1741. The above Examiner statement does not supply the "articulated reasoning with some rational underpinning to support the legal conclusion of obviousness" required under *KSR*. The above Examiner statement is both conclusory and directed to the composition used rather than the method actually claimed. That one of skill in the art could have incorporated some amount of gelatin and lactoferrin into a pharmaceutical composition (e.g. a capsule) does not render the claimed method of treating wounds unpatentable, regardless of whether Ando *et al.* actually suggests the composition or not.

In view of the full content of Ando *et al.*, and because of the differences between Ando *et al.* and the claimed methods (treatment of "opportunistic disease caused by opportunistic microorganisms" verses treatment of wounds), Applicant respectfully requests the rejection be reversed. In addition Applicant respectfully requests the rejection be reversed for failure to provide an adequate explanation of the reasoning behind the rejection, as required under *KSR*.

C. Double Patenting

1. Claims 16-22, 26-30 and 50-51

Claims 16-22, 26-30 and 50-51 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 7, 14, 17-19, 26-32 and 38-40 of co-pending Application No. 10/728,521 (based on the amended claims filed September 26, 2006). Applicants respectfully traverse.

a. Examiner's Burden

A non-statutory, obviousness-type double patenting rejection requires that the Examiner show that the claimed subject matter is not patentably distinct over the commonly owned patent or application. In order to do this, the Examiner must demonstrate why the invention would have been an obvious variation of the invention claimed in the commonly owned patent or application. "Any obviousness-type double patenting rejection should make clear…the reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue is anticipated by, or would have been an obvious variation of, the invention defined in a claim in the patent." MPEP 804(II)(B)(1).

Applicants assert the Examiner has not provided any reason why the instantly claimed invention would have been obvious in view of the claimed subject matter of the cited applications. The rejection only includes a brief description of the claimed invention of both co-pending applications followed by a conclusory and incorrect statement that "Both the claims of the instant application and the claims of the co-pending application are directed to a method of treating bacteremia or sepsis, or treating wounds such as wounds causing bacteremia or sepsis by administering a lactoferrin composition comprising an N-terminal lactoferrin variant."(the Action, page 7) The Examiner, in this statement, has merely combined the elements of both sets of claims without giving any reasoning for linking the two. Further, the conclusory statement recites that both sets of claims are directed to the recited list of elements. However, each set is not drawn to the full set of listed elements, but instead, are distinctly drawn to individual elements listed. For instance, the Examiner states that both sets of claims are directed toward a method of treating bacteremia or sepsis, however, the present application's claims have no reference to or implication relating to the treatment of bacteremia or sepsis.

A conclusory statement, indicating incorrectly that the claims of both commonly owned applications are drawn to the same invention, is not proper support for a non-statutory obviousness-type double patenting rejection. MPEP 804 (II.B.1.) ("Since the analysis employed in an obviousness-type double patenting determination parallels the guidelines for a 35 U.S.C. 103(a) rejection, the factual inquiries set forth in Graham v. John Deere Co., 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103 are employed when making an obvious-type double

patenting analysis…Any obviousness-type double patenting rejection should make clear: (A) The differences between the inventions defined by the conflicting claims - a claim in the patent compared to a claim in the application; and (B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue is anticipated by, or would have been an obvious variation of the invention defined in a claim in the patent.."); Compare *KSR International Co. v. Teleflex, Inc.*, 550 U.S._____, 127 S. Ct. 1727, 1741 (2007) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness," quoting *In re Kahn*, 441 F. 3d 977, 988 (Fed. Cir. 2006)); *Dystar Textilfarben GmbH v. C.H. Patrick Co.*,464 F.3d 1356, 1360-61 (Fed. Cir. 2006); *In re Lee*, 277 F.3d 1338, 1341, 1344-45 (Fed. Cir. 2002).

Applicants assert that the Examiner has not met the burden required for making a double patenting rejection and therefore has not made a proper case of obviousness-type double patenting. Thus, Applicants respectfully request reversal of the rejection.

2. Claims 15-51

Claims 15-51 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-14, 16, 18-22 and 35-38 of co-pending Application No. 10/733,621 (based on amended claims filed September 26, 2006). Applicants respectfully traverse

a. Examiner's Burden

As with the non-statutory obviousness-type double patenting rejection made and discussed above, Applicants assert here as well that the Examiner has not met the burden required for making a double patenting rejection. Similar to the rejection discussed above, the Examiner has not provided any reasoning why a person of ordinary skill in the art would have recognized the instantly claimed invention obvious over the claims of the commonly owned application (10/733,621). Again, the Examiner has only provided a summary of the two claimed inventions followed by a conclusory statement combining the claimed elements of the two applications, with no specific recitation of why the claims would be recognized as obvious.

Applicants assert that the Examiner has not met the burden required for making a proper double patenting rejection. Thus, Applicants respectfully request reversal of the rejection.

VIII. CLAIMS

A copy of the claims involved in the present appeal is attached hereto as Appendix A.

Applicant believes no additional fee is due with this Brief. However, if a fee is due, please charge Deposit Account No. 06-2375, under Order No. HO-P02652US1 from which the undersigned is authorized to draw.

Dated: April 1, 2008

Respectfully submitted,

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APPENDIX A

Claims involved in the Appeal of Application Serial No. 10/663,258

Claims 1-14 are Canceled.

15. (Rejected) A method for treating a wound in a subject comprising the step of contacting the wound with a pharmaceutical composition comprising a therapeutically effective amount of a lactoferrin composition and a pharmaceutically acceptable polymer having a viscosity in the range of about 1 to about 12,000,000 cP at room temperature.

16. (Rejected) A method of treating a wound, other than burn wounds, oral wounds, ophthalmic wounds or gastric or duodenal ulcers, comprising the step of administering to a subject, other than by buccal administration, a therapeutically effective amount of a lactoferrin composition.

17. (Rejected) The method of claim 16, wherein said lactoferrin composition is administered topically, orally or parenterally.

18. (Rejected) The method of claim 17, wherein said lactoferrin composition is administered orally.

19. (Rejected) The method of claim 18 further comprising administering an antacid in conjunction with said lactoferrin composition.

20. (Rejected) The method of claim 16 further comprising administering a standard wound healing therapy in combination with the lactoferrin composition.

21. (Rejected) The method of claim 16, wherein the administering comprises administering said composition for at least one week to at least twelve weeks.

22. (Rejected) The method of claim 16, wherein the amount of the lactoferrin that is administered is about 0.0001 μg to about 100 g per day.

23. (Rejected) The method of claim 16, wherein said composition is a topical gel, a solution, capsule or a tablet having a lactoferrin concentration of about 0.0001% to about 30%.

24. (Rejected) The method of claim 23, wherein said topical gel is composed from a polymer selected from the group of consisting of a vinyl polymer, polysaccharide polymer, glycosaminoglycan polymer, protein polymer, polyoxyethylene-polyoxypropylene polymer, and acrylamide polymer.

25. (Rejected) The method of claim 24, wherein the polymer concentration is about 0.5% (w/w) to about 3.0% (w/w) and the polymer has a molecular weight of about 50,000 to about 13,000,000.

26. (Rejected) The method of claim 16, wherein the wound is selected from the group consisting of skin wound, bone wound, internal wound, and surgical wound.

27. (Rejected) The method of claim 26, wherein the wound is further defined as a chronic wound.

28. (Rejected) The method of claim 26, wherein the wound is further defined as an acute wound.

29. (Rejected) The method of claim 27, wherein the chronic wound is selected from the group consisting of diabetic ulcer, venous stasis ulcer, pressure ulcer, and infected wound.

30. (Rejected) The method of claim 28, wherein the acute wound is selected from the group consisting of laceration, bullet wound, and infected wound.

31. (Rejected) A method of treating a wound, other than burn wounds, oral wounds, ophthalmic wounds or gastric or duodenal ulcers, comprising the step of supplementing the local immune system in a subject by administering topically a therapeutically effective amount of a lactoferrin composition in the vicinity of the wound.

32. (Rejected) The method of claim 31, wherein the therapeutically effective amount of the lactoferrin composition results in the killing of bacteria infecting the wound.

33. (Rejected) A method of enhancing the local immune system in a subject suffering from a wound, other than burn wounds, oral wounds, ophthalmic wounds or gastric or duodenal ulcers, comprising the step of administering topically to the subject a therapeutically effective amount of a lactoferrin composition.

34. (Rejected) The method of claim 33, wherein the lactoferrin composition stimulates the production of a cytokine or a chemokine.

35. (Rejected) The method of claim 33, wherein the lactoferrin composition results in an inhibition of a cytokine or a chemokine.

36. (Rejected) The method of claim 34, wherein the cytokine is selected from the group consisting of interleukin–18 (IL-18), interleukin–12 (IL-12), granulocyte/macrophage colony-stimulating factor (GM-CSF), and gamma interferon (IFN-γ).

37. (Rejected) The method of claim 34, wherein the chemokine is macrophage inflammatory protein 3 alpha (MIP-3α), macrophage inflammatory protein 1 alpha (MIP-1 α), macrophage inflammatory protein 1 beta (MIP-1α).

38. (Rejected) The method of claim 35, wherein the cytokine is selected from the group consisting of interleukin-2 (IL-2), interleukin-4 (IL-4), interleukin-5 (IL-5), interleukin-10 (IL-10), and tumor necrosis factor alpha (TNF- α).

39. (Rejected) The method of claim 33, wherein the lactoferrin composition inhibits the production of matrix metalloproteinases (MMPs).

40. (Rejected) The method of claim 36, wherein interleukin-18 or granulocyte/macrophage colony-stimulating factor stimulates the production or activity of immune cells.

41. (Rejected) The method of claim 36, wherein interleukin-18 or granulocyte/macrophage colony-stimulating factor stimulates the production or activity of cells involved in wound repair.

42. (Rejected) The method of claim 40, wherein the immune cells are selected from the group consisting of T lymphocytes, natural killer cells, macrophages, dendritic cells, and polymorphonuclear cells.

43. (Rejected) The method of claim 42, wherein the polymorphonuclear cells are neutrophils.

44. (Rejected) The method of claim 42, wherein the T lymphocytes are selected from the group consisting of CD4+, CD8+ and CD3+ T cells.

45. (Rejected) The method of claim 41, wherein the cells involved in wound repair are selected from the group consisting of keratinocytes, endothelial cells, fibroblasts, dendritic cells and myofibroblasts.

46. (Rejected) The method of claim 38, wherein the inhibition of TNF-alpha further inhibits the migration and maturation of dendritic cells.

47. (Rejected) The method of claim 46, wherein the dendritic cells are Langerhans cells.

48. (Rejected) A method of treating a wound, other than ophthalmic wounds or gastric or duodenal ulcers, comprising the step of supplementing the systemic immune system in a subject by administering via a parenteral route a therapeutically effective amount of a lactoferrin composition.

49. (Rejected) A method of enhancing the systemic immune system of a subject suffering from a wound, other than ophthalmic wounds or gastric or duodenal ulcers, comprising the step of parenterally administering to the subject a therapeutically effective amount of a lactoferrin composition.

50. (Rejected) A method of treating a wound, other than oral wounds, ophthalmic wounds or gastric or duodenal ulcers, comprising the step of supplementing the mucosal immune system in a subject by administering orally a therapeutically effective amount of a lactoferrin composition.

51. (Rejected) A method of enhancing the mucosal immune system in a subject suffering from a wound, other than oral wounds, ophthalmic wounds or gastric or duodenal ulcers, comprising orally administering to the subject a therapeutically effective amount of a lactoferrin composition.

APPENDIX B

Evidence involved in the Appeal of Application Serial No. 10/663,258

Exhibit 1: Ando *et al.* (U.S. Patent 5,576,299) made of record in an Office Action dated March 27th, 2007.

Exhibit 2: Engelmayer *et al.* (U.S. Publication No. 2004/01423037 A1) made of record in an Office Action dated June 6th, 2007.

Exhibit 3: Co-pending Application No. 10/728,521 made of record in an Office Action dated December 6th, 2006.

Exhibit 4: Co-pending Application No. 10/733,621 made of record in an Office Action dated June 29th, 2006.

APPENDIX C

Related proceedings involved in the Appeal of Application Serial No. 10/663,258

There are no related proceedings involved in this appeal.